

THE INSECT PEST SURVEY
BULLETIN

A periodical review of entomological conditions throughout the United States
issued on the first of each month from March to December, inclusive.

Volume 9

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Number 5

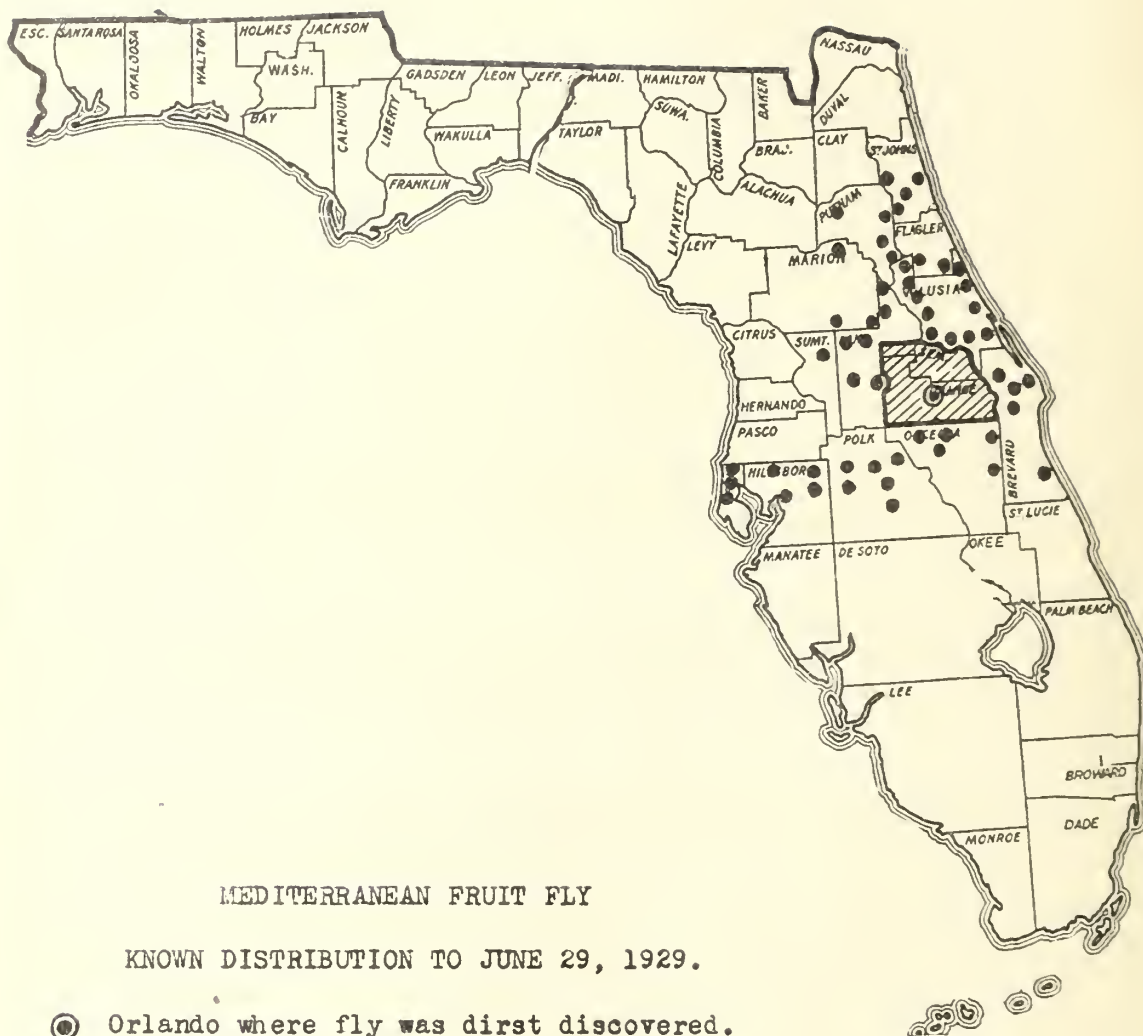
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MEDITERRANEAN FRUIT FLY

KNOWN DISTRIBUTION TO JUNE 29, 1929.

● Orlando where fly was first discovered.

Shaded area first quarantined by the State Plant Board of Florida.

● Subsequently determined infestations.

INSECT PEST SURVEY BULLETIN

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR JUNE, 1929.

The Mediterranean fruit fly has been found at a considerable number of new lightly infested points outside of the generally infested district in Florida during the month of June. These extend the known infested district northeastward to St. Johns County and southwestward to the Gulf near Tampa. In this number of the Survey Bulletin is a map indicating the known infestation and a statement of the situation.

Save for a rather intense infestation in central Nebraska, grasshoppers are attracting but little attention this month. In the Gulf States the eastern lubber grasshopper is doing considerable damage in scattered localities.

Accounts of wireworm damage have been received from practically all parts of the United States during the month and are occasioning considerable concern in parts of New York, Pennsylvania, South Carolina, Nebraska, and Washington.

In the Middle Western States white grubs are very scarce, but reports of serious defoliation by May beetles have been received from practically all of the upper Mississippi Valley and the North Central States.

Cutworm damage has been generally very severe over practically the entire United States east of the Rocky Mountains. A large area extending over southeastern South Dakota, southwestern Minnesota, and northeastern Iowa seems to be a center of most serious depredations.

The wheat straw worm has developed a general outbreak over the greater part of Kansas.

The fall armyworm is now epidemic from Georgia to Mississippi. Many thousands of acres of crops, especially on overflowed land, have been entirely destroyed.

Damage by the corn ear worm is beginning to appear as far northward as Kansas and Delaware.

The seed corn beetle did considerable damage in central counties in Illinois and was reported as occurring in great numbers in Nebraska.

The range caterpillar (Hemileuca oliviae Ckll.) is seriously damaging some of the most valuable range land in northeastern New Mexico. Fifteen years ago a similar outbreak occurred in this region.

The rosy apple aphid has developed during the month to be more abundant in the Middle Atlantic States than it has been in many years. Similar conditions are reported from Arkansas.

The codling moth promises to be more abundant than usual in central and western Illinois and about normally abundant over the remainder of the eastern apple-growing sections.

Damage by the plum curculio is generally severe from New Hampshire to Georgia along the Atlantic coast. West of this region the curculio seems to be less troublesome than usual.

The filbert bud mite (Eriophyes avellanae Nal.) has been discovered in Stamford, Conn. Heretofore this insect has been known in the United States only in Oregon, where it is a pest of considerable importance.

The seed corn maggot is very serious in the North Central States eastward to northern New York and is also very prevalent in many parts of California.

The Mexican bean beetle is more destructive in Alabama than any year since its discovery in the State. It is occasioning serious damage throughout its entire present known range.

Brood III of the periodical cicada is appearing quite generally over the district in Iowa and Illinois known to be inhabited by this brood.

The gypsy moth seems to be more seriously prevalent in New England than it has been for several years.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

- Florida J. R. Watson (June 23): Grasshoppers are moderately abundant, which is the usual condition all over Florida. The eastern lubber grasshopper (Romalea microptera Beauv.) is the most troublesome, especially in the south.
- Louisiana H. Spencer (June 25): The eastern lubber grasshopper was very abundant around Baton Rouge June 25.
- Mississippi R. W. Harned (June 24): The eastern lubber grasshopper was abundant around the shrubs in a yard at Columbus June 3.
- Wisconsin E. L. Chambers (June 21): Melanoplus atlanis Riley is moderately abundant in the northeastern counties. Camnula pellucida Scud. is moderately abundant also in this section.
- North Dakota J. A. Munro (June 25): Grasshoppers (Melanoplus bivittatus Say and other species) were present in small numbers at Mandan, Morton County, June 20, but at Garrison, Burleigh County, they were abundant and noticeable injury to crops was apparent.
- Nebraska M. H. Swenk (May 15-June 15): Grasshoppers were hatched and already doing damage in the alfalfa and small grain fields, especially oats, by the first of June. One Brown County correspondent reported the loss of 10 acres of oats on May 26 and 27, with a threat of the loss of the entire field. In Dawson County by June 10 they were getting numerous in the alfalfa fields and threatening serious damage.

WIREWORMS (Elateridae)

- New York C. R. Crosby (June 13): Wireworms did much damage to peas in sandy soil in Chautauqua County.
- Pennsylvania C. A. Thomas (June 22): Larvae of an undetermined species of Melanotus was found in association with Pheletes agonus Say in Philadelphia and Bucks Counties on young beets, cabbage, lettuce, newly planted lima beans, and some garden flower roots during May and June. The adults were common in late May and early June, feeding on the flower heads of rhubarb.
- South Carolina M. H. Brunson (June 25): Horistonotus uhleri Horn is very abundant on corn, peas, cotton, etc., at Brunson.
- Nebraska M. H. Swenk (June): Melanotus fissilis Say is moderately abundant in eastern Nebraska. The present spring has been one marked by considerable damage by wireworms. This damage showed up most strongly during the last week of May. Damage was most severe in stream-bottom cornfields, and M. fissilis seemed to be the chief depredator in these fields.

Washington

M. C. Lane (May 27): Wireworms have been active during this month attacking early seed potatoes and spring seeded onions. More or less damage has been reported upon nearly all garden truck crops around Walla Walla. Adults have been active since April 1st., with peak of flight about first week in May. Adults of Pheletes canus Lec. were obtained from blossoms of young cherry and pear trees where some feeding damage was noticed. Thousands of this species were collected from seed heads of rhubarb for our rearing work at the laboratory. Emergence of P. occidentalis Cand. was less numerous than of P. canus, and practically no feeding by this species was noted. Other species of wireworm adults collected this spring are Melanotus oregonensis Lec., Ludius inflatus Say, Dolopius lateralis Esch., Cardiophorus tenebrosus Lec., and Pheletes venablesi Wick.

WHITE GRUBS (Phyllophaga spp.)

Illinois

C. C. Compton (June): Adults of Phyllophaga fusca Froel. were observed in heavy flights May 28, 29, 30, and 31, in Cook County. Many oak groves or scattered oaks in pastures throughout central and north-central Illinois have been almost completely defoliated.

Wisconsin

E. L. Chambers (June 21): White grubs are scarce, but beetles are very abundant, defoliating many oak, poplar, elm, and other trees in spots.

Minnesota

A. G. Ruggles and assistants (June): Although June beetles are being observed in large numbers, white grubs are very scarce in the fields this year.

Iowa

C. J. Drake (June): Adults are from moderately to very abundant in the eastern part of the State.

H. E. Jaques (May 31): Adult May beetles seem to have been delayed in making their appearance this spring but during the past 10 days or two weeks have more than made up for lost time. Their choice food plants are fairly covered with them on warm nights, and timber and shade trees, as well as many rose bushes, are suffering severely in defoliation. At least 10 species are represented in those that are now out.

Nebraska

M. H. Swenk (May 15-June 15): Adult May beetles of several species have been flying abundantly during the period here covered, presaging a return of serious white-grub conditions in 1930.

JAPANESE BEETLE (Popillia japonica Newm.)

Virginia

R. J. Haskell (June 18): Dr. Haskell, of the

Bureau of Plant Industry, called up to inform us that employees of his office visiting Fort Myer had heard reports of injury there by the Japanese beetle.

BERTHA ARMYWORM (Barathra configurata Walk.)

North Dakota J. A. Munro (June 25): June 16 is the earliest record taken of the emergence of the bertha armyworm.

CUTWORMS (Noctuidae)

Pennsylvania C. A. Thomas (June 22): Cutworms have been very injurious in certain localities in southeastern Pennsylvania during early June. Tobacco has been injured in Lancaster County and beets have suffered some in certain fields in Bucks County. Several cornfields have been badly injured, the loss in one field amounting to about 20 per cent of the plants. The cutworms in this field were almost all Agrotis ypsilon Rott.

Indiana J. J. Davis (June 27): Agrotis ypsilon Rott. has been reported destructive in Gibson County along the Wabash River in overflowed areas. The granulated cutworm Feltia annexa Treit. damaged corn at Rennsselaer, June 22.

Wisconsin E. L. Chambers (June 20): Many reports are being received to the effect that Oligia fractilinea Grote is again doing serious injury to patches of corn along fence rows and ditches.

Minnesota A. G. Ruggles and assistants (June): Cutworms are reported from moderately abundant to very abundant in nearly every county in the southern third of the State, and at Ivanhoe, Lincoln County, gardens have been almost completely destroyed where poison was not used.

North Dakota J. A. Munro (June 25): Porosagrotis orthogonia Morr. is reported to be causing serious injury to flax, corn, and other crops in Hettinger, Adams, Grant, Morton, Oliver, Stark, and Dunn Counties, all of which are west of the Missouri River. All specimens received from that section are this species.

South Dakota H. C. Severin (June 24): Several species of cutworms did an enormous amount of damage to garden and truck crops. Chorizagrotis auxiliaris Grote was the principal species present. Injury is now subsiding.

Iowa C. J. Drake (June): Cutworms are from moderately to very abundant over the entire State.

Nebraska M. H. Swenk (May 15-June 15): The outstanding injury to field crops during the period here covered was the depredation of various cutworms to young corn. Thousands of acres of corn had to be replanted because of the destruction of the young

plants. Although the condition was general throughout the corn-growing portions of Nebraska, it was especially severe in northeastern Nebraska in an area including the Platte Valley. These injuries were most intense from May 20 to June 5.

Kansas

J. W. McColloch (June 6): Cutworms have caused some injury to corn at Sabetha and Dellvale. (June 11): Prodenia ornithogalli Guen. has caused some injury to corn in a field in Morris County.

Mississippi

R. W. Harned (June 24): A correspondent at Conehatta, Newton County, sent to us on June 15 specimens of Prodenia eridania Cram. with the information that they were eating the leaves and small tomatoes on her tomato plants. One May 28, County Agent C. G. Steele, of Clarksdale, sent specimens of Prodenia ornithogalli Guen. to this office with the report that they were doing quite a lot of damage to young cotton in his section. On May 29 a correspondent at Crawford reported the same insect eating the leaves of cotton.

Arizona

O. L. Barnes (June 24): Feltia annexa Treit. and other species are very abundant at Buckeye.

General

C. M. Ainslie (June 3): Further investigations of cutworm infestation reveals the fact that a large area extending over southeastern South Dakota, southwestern Minnesota, and northeastern Iowa has this year an abnormal number of cutworms of varying sizes that are doing great injury to both garden and field crops. Some cornfields have the worms present in nearly every hill and farmers are compelled to replant. A lot of 150 worms submitted for identification showed Euxoa messoria Harr. the dominant form present.

ARMYWORM (Cirphis unipuncta Haw.)

New York

Weekly News Letter, N. Y. State College of Agr., June 24: Armyworms are very thick in some hay fields and have forced many to harvest their hay prematurely.

Pennsylvania

T. L. Guyton (June 26): I am sending larvae which I have identified as armyworms. They were collected on oats and wheat in Lancaster County on June 20.

Indiana

J. J. Davis (June 27): The armyworm damaged corn at Greensburg (June 10).

CEREAL AND FORAGE - CROP INSECTS

WHEAT

WHEAT STRAW WORM (Harmolita grandis Riley)

Kansas

J. W. McColloch (May 29): Recent surveys in the State indicate that we are to have a rather heavy outbreak of the wheat straw worm. This insect has been found abundant in eastern Kansas, and also throughout the major wheat belt of the State which takes in the central portion. The adults of the second brood are now emerging in the field and in some cases as many as 4 females were found depositing in a single wheat stem. (June 20): A general outbreak of this insect has developed over most of western Kansas. Farmers are reporting as high as 50 per cent of the stems infested.

CORN

FALL ARMYWORM (Laphygma frugiperda S. & A.)

Georgia

O. I. Snapp (June 25): A very heavy infestation has just started in one cornfield in the eastern part of Peach County and the northern part of Houston County. Considerable damage has been done to late-planted corn, 100 per cent of the plants being ruined in one field where corn followed wheat that was turned under after hail and wind damage.

Alabama

J. M. Robinson (June 25): The fall armyworm is particularly destructive on the young corn in the lowlands. I visited 1,000 acres of corn a week ago where there were from 1 to 50 larvae on each stalk. This land had been submerged all of the month of March, except 5 days, to a depth of from 10 to 50 feet of water. The prison farmers were dusting the corn to save it. The same insect had caused considerable damage in Baldwin and Mobile Counties a month ago. Many thousand acres are damaged in the river lowlands and 800 on the prison farm. Reports have been received from Montgomery County, Elmore, Greensboro, Atmore, Baker Hills, and Bay Minette.

Mississippi

State Plant Board of Mississippi (June 24): An outbreak of southern grassworms on corn in Oktibbeha County has just been reported by County Agent R. M. Lancaster. The worms are working rapidly and many fields of corn will be ruined within a short time unless poison is applied.

R. W. Harned (June 19): On June 5, Inspector H. Gladney, Ocean Springs, wrote as follows: "The southern grassworms were very abundant here about two weeks ago. I know of seven

fields of corn where they occurred. About 5 acres of a 20-acre field were completely destroyed. The corn was knee-high and was eaten to a stub about 3 inches high. Three acres of a 10-acre field were destroyed. The worms did considerable damage in other fields." (June 24): The southern grassworm was reported injuring corn in Yazoo, Kemper, George, Adams, Madison, and Oktibbeha Counties during the past few weeks. Grass was found infested at Picayune on June 13.

Louisiana

H. Spencer (June 25): An extensive outbreak of grassworms on sugarcane at Houma. On June 20 the worms were maturing and were pupating in large numbers. In several fields the sugarcane leaves have been stripped to midribs.

CORN EAR WORM (Heliothis obsoleta Fab.)

Delaware

H. L. Dozier (June 24): The corn ear worm was reported as working in the buds of young corn from 5 to 6 inches high at Newark on June 17.

Kansas

G. A. Dean and J. W. McCulloch (June): The corn earworm is moderately abundant; damage by the first brood is beginning to appear.

Mississippi

R. W. Harned (June 24): Complaints of corn ear worm injury came in large numbers the last month. Vetch, corn, tomatoes, and cotton are among the crops injured in Meridian, Kewanee, Raleigh, Belzoni, Perkinston, Crenshaw, and Newton.

Louisiana

H. Spencer (June 25): The corn ear worm is very abundant in late-planted corn generally.

Arizona

O. L. Barnes (June 24): This insect is abundant in all fields of sweet corn examined; considerable injury found in some fields.

STALK BORER (Papaipema nebris nitela Guen.)

Maryland

F. M. Wadley (May 31): Several larvae of this insect were found injuring young corn at Silver Spring. The larvae were less than half grown. Injury has been noticed for about two weeks.

Indiana

J. J. Davis (June 27): The common stalk borer was frequently reported throughout the month beginning with the first report from Whitland June 1.

Illinois

W. P. Flint (June 19): As has been the case for the past several years, this insect is attracting considerable attention. A number of cases have been reported of injury to corn, potatoes, and flowering plants.

Wisconsin E. L. Chambers (June 21): The stalk borer is moderately abundant, destroying patches of corn along the fence rows and ditches in the southern counties. It seems to be more abundant than last year.

Kansas J. W. McColloch (June 20): The stalk borer is apparently going to be a pest of considerable importance again this year.

SOD WEBWORMS (Crambus spp.)

Indiana J. J. Davis (June 27): Sod webworms were reported damaging corn early in June at Manila, Columbus, and Osgood.

Illinois W. P. Flint (June 19): Sod webworms have been general over the northern half of the State. Damage was not quite so severe as last year in most cases reported.

Iowa C. J. Drake (June): Sod webworms have done a considerable amount of injury to corn in the southern half of the State. When billbugs are present in the same fields, growers frequently attribute the work entirely to the billbugs and overlook the large populations of sod webworms.

GARDEN WEBWORM (Loxostege similalis Guen.)

Kansas J. W. McColloch (June 11): Serious injury to corn by the garden webworm is reported from a few fields of corn in the southern part of Morris County.

Mississippi R. W. Harned (June 24): Specimens of garden webworms were collected on butterbeans at Cleveland on June 3, and on cotton at Leota Landing on the same date, but very little injury was reported.

LARGER CORN STALK BORER (Diatraea zeacolella Dyar.)

Florida J. R. Watson (June 23): The larger corn stalk borer has been unusually abundant in western Florida.

Alabama J. M. Robinson (June 25): The larger corn stalk borer has done quite a bit of damage to corn in central and southern Alabama, infestations varying from 5 to 50 per cent. Reports received from the following places: Ozark, Greenville, Troy, Andalusia, Columbia, and Loachapoka.

SEED CORN BEETLE (Agonoderus pallipes Fab.)

Illinois W. P. Flint (June 19): These beetles have caused considerable damage in the central counties.

Nebraska M. H. Swenk (May 15-June 15): The seed corn beetle which was reported as appearing in great numbers during the first week in

April, did not do so much harm to planted seed corn as was anticipated. Nevertheless, one Butler County correspondent on May 20 reported that the seed in a portion of his cornfield had been destroyed by these beetles.

GRAPE COLASPIS (Colaspis brunnea Fab.)

Alabama

J. M. Robinson (June 25): We have had another interesting insect activity in the form of the chrysomelid Colaspis brunnea in the Tennessee Valley, where a substation has been recently established. There were about 120 acres of lespedeza that had been on the land for some three years. This spring the superintendent had his land turned and decided to plant experimental plots of corn, cotton, oats, and many of the common garden vegetables, as well as soy beans. The larvae proceeded to girdle the main root stems of all the plants, except oats, potatoes, and tomatoes. The cotton has been planted three or four times. Adults are emerging on the old field of lespedeza and will soon be emerging from the plot fields as well.

Louisiana

T. E. Holloway and W. E. Haley (May 24): A beetle which is undoubtedly Colaspis brunnea was found damaging corn in St. Charles Parish. It was feeding on the tender leaves.

BLUE-GRASS BILLBUG (Sphenophorus parvulus Gyll.)

Nebraska

M. H. Swenk (May 15-June 15): The timothy billbug had so injured a field of young corn in Washington County by May 25 that the owner had to replant the field.

North Carolina

C. H. Brannon (June 10): Billbug damage to corn has been especially bad in the coastal plains sections of the State.

CORN-SILK BEETLE (Luperodes varicornis Lec.)

Mississippi

R. W. Harned (June 24): Specimens tentatively identified by J. M. Langston were reported as eating corn silk at Tylertown on June 8 and at Brandon on June 22. They were also abundant on flowers at Tylertown.

SLENDER SEED CORN GROUND BEETLE (Clivina impressifrons Lec.)

Illinois

W. P. Flint (June 19): These beetles have caused considerable damage in the central counties.

CORN ROOT APHID (Anuraphis maidi-radicis Forbes)

South Carolina

M. H. Brunson (May 31): Anuraphis maidi-radicis has seriously damaged corn and cotton at Ridgeville.

RANGE GRASS

RANGE CATERPILLAR (*Hemileuca oliviae* Ckll.)

New Mexico

W. R. Walton and V. L. Wildermuth (June 19): An outbreak of the range caterpillar is in progress in the northeastern counties of New Mexico east of the Rocky Mountains. The principal counties involved are Colfax, Union, Mora, and San Miguel, where many thousands of acres of the best cattle range in the State are severely infested. In a recent survey conducted by the Bureau fertile eggs of the species were found abundantly present with a very low percentage of parasitism. Fifteen years ago a disastrous outbreak of this insect occurred here which destroyed or rendered inedible large areas of the valuable gramma grass range. There is every indication that a recurrence of this condition is now in progress. Owing to the cold, backward spring that prevailed in the region this year, the eggs were late in hatching, but it is expected that by August severe injury by the range caterpillar will occur in most of the counties mentioned.

ALFALFA AND CLOVER

CLOVER LEAF WEEVIL (*Hypera punctata* Fab.)

Delaware

H. L. Dozier (June 13) : Dr. J. F. Adams reports about half of a 15-acre field of young lima beans badly injured by the clover leaf weevil and the clover root curculio near Ellendale June 5. From 25 to 35 per cent of the stand of 4 to 5 inch plants were destroyed. This field was in clover which was plowed under this spring.

ALFALFA WEEVIL (*Phytonomus posticus* Gyll.)

Nevada

G. C. Schweis (June 21): The cold weather has retarded oviposition over the State.

BEET ARMYWORM (*Laphygma exigua* Hubn.)

Arizona

O. L. Barnes (June 24): An insect, probably *L. exigua*, was reported by Mr. J. L. E. Lauderdale as doing serious injury to alfalfa in Yuma County. The same species was also attacking young cotton plants in a near-by field.

F R U I T I N S E C T S

APPLE

APHIDS (Aphiidae)

- Massachusetts A. I. Bourne (June 24): Fruit aphids are scarce to moderately abundant and beginning to become abundant in some orchards.
- Michigan R. H. Pettit (June 22): All sorts of aphids are very abundant.
- Minnesota A. G. Ruggles and assistants (June): Fruit aphids are reported as very abundant in Brown and Hennepin Counties, and moderately abundant at a number of other points in the southern part of the State.
- North Dakota J. A. Munro (June 25): Aphids have been unusually abundant on cherry, plum, dogwood, boxelder, lilac, and willow trees this season. Observations made at Fargo, Mandan, and Bismarck, and reports sent in to this office through the mail would indicate that these insects are widespread and more abundant than usual throughout the State.
- Iowa H. E. Jaques (May 31): Aphids of many species are unusually abundant this year and their food plants are suffering in consequence.
- Nevada G. C. Schweis (June 21): Fruit aphids have been noticed on apple, peach, and plum at Reno.

APPLE APHID (Aphis pomi DeG.)

- New York C. R. Crosby and assistants (June): Early in the month these insects were becoming abundant on the terminal growth in the western part of the State, and by the middle of the month they were increasing so rapidly as to occasion measures for their control.
- Virginia W. J. Schoene (June 22): In some commercial orchards the green aphid has curled the leaves on a few tips of apples. No great damage has been caused. It appears that the aphids are present in smaller numbers than previously.

ROSY APPLE APHID (Anuraphis roseus Baker)

- Connecticut W. E. Britton and assistants (June): The rosy apple aphid is very abundant. This insect is less abundant in the eastern part of the State and reported as leaving the apple trees in Hartford County. It is more abundant than last month in New Haven and other localities.

New York

C. R. Crosby and assistants (June): In the western part of the fruit belt the rosy apple aphid hatched in greater numbers than it has in many years and threatens very serious losses over the greater part of the fruit belt. Hatching commenced about the first week in April and by the first week in June it had spread quite generally over the orchards.

Arkansas

B. A. Porter (June 21): From a letter from A. J. Ackerman, May 4. "We are having a rather bad outbreak of the rosy apple aphid at Bentonville this spring. More damage has been done to date than in any previous season. Each season this insect seems to become more abundant. The first aphids were found on March 31 and since that time we have had continuous cold, wet weather so that parasites and predators have not started to work."

APPLE GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

Wisconsin

E. L. Chambers (June 22): Very abundant on apple throughout the apple-growing sections.

CODLING MOTH (Carpocapsa pomonella L.)

New York

C. R. Crosby and assistants (June): Codling moth adults were observed during the first week of the month in the Hudson River Valley, by the middle of the month they were emerging in the upper Lake Region, and by the end of the month side-worm injury was seen in Orange County.

North Carolina

C. H. Brannon (June 25): Codling moth injury is rather severe in the mountains.

Illinois

W. P. Flint (June 19): The present indications are that the codling moth is more abundant than usual in the central and west-central Illinois orchard sections, and that the second brood will start hatching in southern Illinois about June 3 or 4. The start of the hatch will be quite a little later in central Illinois.

S. C. Chandler (June): Larvae were found under bands at Carbondale June 5; first pupation was observed June 12.

C. C. Compton (June): This insect is moderately abundant in Cook County; emergence was two weeks late and irregular.

Wisconsin

E. L. Chambers (June 21): This insect is moderately abundant in the southern counties.

Minnesota

A. G. Ruggles and assistants (June): The codling moth was reported as very abundant during the first two weeks of June in Hennepin, Martin, and Meeker Counties.

Missouri

L. Haseman (June): In central Missouri the peak of the first-brood moth emergence occurred between May 27 and June 10. The greatest abundance of worm entrance was expected to appear around June 15, and most of the worms have now (June 25) entered the fruit. The earliest first-brood worms are full fed and a few have begun to pupate.

Nebraska

M. H. Swenk (May 15-June 15): The over-wintering larvae reached their maximum of pupation on May 23. The first spring-brood moths appeared on May 19 and the maximum of the emergence of this brood was on June 9. The first eggs of the first brood were laid June 13. This corresponds closely to these same events in 1928, when they occurred on May 24 and 25 and June 8 and 15.

Kansas

B. A. Porter (June 21): From a letter from P. M. Gilmer, Wichita, May 31. "Worms are just beginning to show up. The first injury in the field was noted on May 27, one day later than last year. A very small part of the first brood is this far advanced. I expect the heavy hatch about June 3 or 4. Hatching worms seem to lack vigor. We have found 10 or 12 fruits of which fully 50 per cent had dead larvae in them. I rather think that the cold May, together with the remains of our calyx spray lead arsenate is accountable for the dead worms. The eggs for this section were laid May 17 and none of the larvae were over 24 hours old when found."

Arkansas

B. A. Porter (June 21): Letter from A. J. Ackerman, Bentonville, June 7. "Most of the moths of the spring brood have emerged. It has rained almost every day since before bloom and the first brood of worms will be light. We had 10 inches of rain last month and it has rained hard every day this month."

EASTERN TENT CATERPILLAR (*Malacosoma americana* Fab.)

New Hampshire

P. R. Lowry (June 25): The eastern tent caterpillar moderately abundant. Nearly all had pupated on June 21 at Durham.

Connecticut

J. E. Britton (June 22): This insect is much less abundant than last month throughout the State. A moderate number of nests were started and were not completed. Cold weather in April and May was unfavorable for the young caterpillars.

FRUIT TREE LEAF ROLLER (*Archips argyrospila* Walk.)

New York

C. R. Crosby and assistants (June): Although this insect is doing considerable damage in a few orchards, it is not abnormally abundant in either the Lake fruit belt or the Hudson River Valley.

Michigan

R. H. Pettit (June 21): The fruit tree leaf roller is present in unusual numbers about half way up the State on the west shore. The larvae are well grown and doing severe injury. As usual, they fail to respond to arsenical sprays.

PISTOL CASE BEARER (Coleophora malivorella Riley)

West Virginia

B. A. Porter (June 21): There was an outbreak of the pistol case bearer in an apple orchard near Charlestown this spring. The case bearers were so abundant that a large percentage of the blossom buds were killed before opening and a great deal of defoliation has occurred since.

APPLE AND THORN SKELETONIZER (Hemiphysa pariana -Clerck)

New Hampshire

P. R. Lowry (June 25): The apple and thorn skeletonizer is common in the southern third of the State, doing considerable damage to unsprayed trees in some localities.

LEAFHOPPERS (Cicadellidae)

Virginia

W. J. Schoene (June 22): The conspicuous leafhopper in the Virginia orchards just at the present is the yellowish leafhopper, Typhlocyba pomaria McAtee. The nymphs have all matured and the adults are mating.

Minnesota

A. G. Ruggles and assistants (June): Apple leafhoppers have not yet put in their appearance over the greater part of the State. Several counties, however, have reported them as moderately abundant and reports from Hennepin and Martin Counties indicate that they are very abundant.

Kansas

J. I. McColloch and G. A. Dean (June): Apple leafhoppers are moderately abundant, especially on nursery stock.

BUFFALO TREEHOPPER (Ceresa bubalus Fab.)

Wisconsin

E. L. Chambers (June 20): During the past three years this pest has been appearing in increasing numbers and doing serious damage to young fruit trees throughout the State, but particularly in Kewaunee, La Crosse, Brown, and Manitowoc Counties, where sweet clover is being used as a cover crop in the orchards.

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Ohio

J. S. Houser (June 18): The apple flea weevil is unusually prevalent and destructive in Ohio this season. Noticeable commercial injury has been observed at Lorain, which is quite near the Lake. We have also received a number of reports that this insect is noticeably abundant as far south as the Ohio River. The Delaware section, however, remains the center

of infestation and some orchards in this area are very severely damaged. At this time the summer brood of beetles is appearing.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Florida J. R. Watson (June 23): The red-headed scale fungus, Sphaerostilbe auranticola, is controlling the San Jose scale very well.

Ohio E. W. Mendenhall (June 17): I note the first movement of the young San Jose scale June 10, infesting flowering crab apple in one of the parks in Springfield. The infestation is quite bad on susceptible plants in the parks in Springfield. On account of the prolonged cool weather the movement of the scale is somewhat later in this latitude. Percentage of survival of the scale in Ohio is perhaps a little higher than usual.

Wisconsin E. L. Chambers (June 20): The severe weather of last winter appeared to have greatly checked this pest, which is only present in seven counties in the southern part of the State and there in small numbers.

Kansas J. W. McColloch and G. A. Dean (June): The San Jose scale is very abundant in areas where it occurs.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

New York Weekly News Letter, N. Y. State College of Agr., June 3: Ontario County. The oyster-shell scale began hatching on May 27.

Michigan R. H. Pettit (June 22): This insect is very abundant.

Minnesota A. G. Ruggles and assistants (June): The oyster-shell scale is quite generally abundant over the southern third of the State and increasing rapidly. It has been reported as very abundant from Hennepin, Waseca, Mower, and Fillmore Counties.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

New York Weekly News Letter, N.Y. State College of Agr., June 10: Niagara County. Several cottony-cushion scales with egg masses were found in the Lake Zone orchards the third week in May.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

New York C. R. Crosby and assistants (June): A large number of pear

psylla eggs were laid in western New York and the Hudson River Valley. The warm weather toward the end of the month was accompanied by a rapid increase in the psylla, which, though threatening, has not yet done much damage.

PEAR MIDGE (Contarinia pyrivora Riley)

Massachusetts

A. I. Bourne (June 24): Reports have been received of outbreaks in Plymouth County and in the north-central part of the State. Serious in some orchards, but infested areas are not extensive.

New York

C. R. Crosby and assistants (June): Pear midge infestations seem to be quite general in the Hudson Valley, in some cases as high as 25 per cent of the fruit being infested.

PEACH

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

Connecticut

P. Garman (June 24): Judging from the amount of early twig injury in New Haven and Hartford Counties, there will be fully as much damage to fruit as occurred last year.

North Carolina

R. W. Leiby (June 19): This insect is present on peaches in the usual numbers throughout the State, but is feeding in midseason ripening peaches, which is rather unusual.

Georgia

O. I. Snapp (June 20): The infestation in the middle Georgia peach belt is light.

Ohio

E. W. Mendenhall (June 12): I find quite a severe outbreak on peach in Miami County.

Illinois

S. C. Chandler (June): The first moths of the second brood emerged at Carbondale on June 3, and eggs were found on the leaves, some ready to hatch, on June 14. Practically all of the larvae of the first brood have left the twigs and no new entrances can be found. The first-brood infestation was generally light.

Tennessee

A. C. Morgan and assistants (June 26): The oriental fruit moth is severely injuring a 3-year-old peach orchard near Clarksville, as many as 10 to 15 larvae being found on most of the trees.

Alabama

J. M. Robinson (June 22): Moderately to very abundant at Anniston, Bessemer, Birmingham, and Auburn.

Mississippi

R. W. Harned (June 24): The oriental peach moth has been

received recently from Pike, Alcorn, and Prentiss Counties. Dr. M. R. Smith also reported observing injury to peach trees in Lowndes and Clay Counties.

PLUM CURCULIO (Conotrachelus nemuphar Hbst.)

- New Hampshire P. R. Lowry (June 25): On June 14 an average of from 8 to 10 beetles were jarred from small peach trees at Wilton.
- Connecticut M. P. Zappe (June 22): There are about the usual number of adults. The apple crop is less than usual, therefore the curculio appears to be doing more damage over the State.
- New York C. R. Crosby and assistants (June): The plum curculio seems to be more abundant than usual this year; in fact, in the lower part of the Hudson River Valley the growers believe that it is more abundant than it has ever been.
- Delaware H. L. Dozier (June 13): The curculio infestation appears to be the heaviest since 1921. Large numbers of the mymarid Anaphoidea conotracheli Girault are now being reared from eggs of the curculio at Camden.
- North Carolina R. W. Leiby (June 19): Ripening peaches and early midseason varieties show heavier infestation by far than usual. Indications are for heavy losses by the curculio in late varieties. The peak of the first-brood adult emergence was June 10 in our commercial sandhill peach section.
- Georgia O. I. Snapp (June 20): Second-generation larvae have started to appear in the Fort Valley section. The infestation is heavy where curculio control measures have not been properly enforced.
- Illinois S. C. Chandler (June): The orchards in southern Illinois show a lighter infestation than last season. A cold, rainy spring has prevented some feeding. Jarring in sprayed and unsprayed orchards showed a gradual increase in numbers occurring on peach up to June 1, the peak. Since then there has been a considerable falling off until the present time, June 14.
- Michigan R. H. Pettit (June 22): The plum curculio is very abundant.
- Missouri L. Haseman (June): This insect emerged late. Larvae are one-half grown and a few full fed. It is now moderately abundant and causing severe damage.
- Alabama J. M. Robinson (June 25): This insect is moderately abundant at Auburn and Fairfield.

CHEERRY

BLACK CHERRY APHID (Myzus cerasi Fab.)

New York

C. R. Crosby and assistants (June): This insect is so numerous in Ulster, Monroe, Niagara, and Oswego Counties that the crop has been materially reduced. It is also reported as being very abundant in Ontario, Genesee, Orange, Chautauqua, and Dutchess Counties.

Wisconsin

E. L. Chambers (June 21): This insect is very abundant on cherry over the State.

UGLY-NEST CATERPILLAR (Cacoecia cerasivorana Fitch)

New England

J. V. Schaffner, jr. (June 25): Ugly-nest caterpillars are common to abundant on wild cherry and choke cherry in eastern Massachusetts. We have reports of it being abundant in Burlington, Lowell, and Woburn, Mass., and Bucksport, Me., and also from many localities in southern New Hampshire.

Maryland

F. E. Brooks (June 24): On June 14, nests of this insect were observed covering choke cherry and other plants along the roadside near Accident. The nests were very conspicuous and the caterpillars occurred in great numbers. In many cases the masses of web entirely covered small apple trees and other bushes, and was being spread over grass and alfalfa plants. At least 33 species of plants were being attacked. These included choke cherry, apple, viburnum, primrose, wild plum, and alfalfa. The infestation extended about a mile along the highway.

DARK CHERRY FRUIT FLY (Rhagoletis fausta O. S.)

New York

C. R. Crosby and assistants (June): The first adult was taken from trap cages in Ulster County June 3, in Chautauqua County June 6, in Columbia County June 10, and in Erie County June 12, and by the 20th of the month the peak of emergence had been reached in the western part of the State.

Michigan

R. H. Pettit (June 19): The dark cherry fruit fly commenced to emerge at Gobles this morning. Thus far Michigan has found R. fausta in that one location alone. R. cingulata Loew infests the rest of the cherry belt.

PEACH BARK BEETLE (Phthorophloeus liminaris Harr.)

New York

Weekly News Letter, N. Y. State College of Agr., June 10: Niagara County. A rather severe infestation of the peach bark beetle was found in a small planting of both sweet and sour cherries recently.

RASPBERRY

RASPBERRY FRUIT WORM (Byturus unicolor Say)

- New York C. R. Crosby and assistants (June): In the lower Hudson River Valley this insect caused very considerable damage to red raspberries. It was also reported as doing appreciable damage in Erie and Wayne Counties.
- Wisconsin E. L. Chambers (June 20): There has been a general complaint from this pest for the past two years and many inquiries are being received for control measures.
- Minnesota A. G. Ruggles and assistants (June): The raspberry Byturus has been reported.

GRAPE

GRAPE FLEA BEETLE (Haltica chalybea Ill.)

- New York C. R. Crosby and assistants (June): The grape flea beetle is very abundant on grapes in Yates County and in parts of Chautauqua County.
- Ohio E. W. Mendenhall (June 3): The larvae are found feeding on the leaves of the grapevines in Columbus and vicinity. They are feeding very greedily and damage is being done.

GRAPE CURCULIO (Craponius inaequalis Say)

- West Virginia F. E. Brooks (June 24): The grape curculio is abundant at French Creek on vines of cultivated and wild grapes. The feeding marks are conspicuous on the leaves and oviposition in the fruit had begun on June 20. Indications point to a serious attack.

GRAPE PLUME MOTH (Oxyptilus periscelidactylus Fitch)

- Massachusetts A. I. Bourne (June 24): This insect is more abundant than usual, many complaints having been received from small growers.
- J. V. Schaffner, jr. (June 25): This insect caused considerable alarm during the last of May in the vicinity of Melrose and Wakefield. In one section of Revere, where many grapes are grown and severe pruning is practiced, no larvae could be found.

CURRENT AND GOOSEBERRY

IMPORTED CURRENT WORM (Pteronidea ribesii Scop.)

- Wisconsin E. L. Chambers (June 20): Our nursery inspectors are find-

ing this pest quite generally destructive this summer on currant and gooseberry.

Nebraska

M. H. Swenk (May 15-June 15): The imported currant worm was very injurious to gooseberry and currant bushes during the period from May 28 to June 8 all over the eastern part of the State, westward, in the Platte Valley, to Kearney and Buffalo Counties.

CURRANT STEM GIRDLER (Janus integer Nort.)

New York

C. R. Crosby and assistants (June): This insect is very abundant in some plantings in Chautauqua County and is also doing some damage in Orange County.

CURRANT APHID (Myzus ribis L.)

Wisconsin

E. L. Chambers (June 20): Currant bushes seemed to be quite generally infested with this pest this summer in the southern part of the State.

BLACK VINE WEEVIL (Brachyrhinus sulcatus Fab.)

New York

Weekly News Letter, N.Y. State College of Agr., June 3: Orange County. The roots of gooseberry bushes are being injured by B. sulcatus.

CHESTNUT AND HAZELNUT

A WEEVIL (Balaninus auriger Casey)

West Virginia

F. E. Brooks (June 24): Beetles issued from the soil about the middle of May. Their numbers indicate a heavy infestation next autumn of the few remaining chestnuts at French Creek.

Maryland

F. E. Brooks (June 24): Adults were found in numbers on the catkins of Japanese chestnuts at Denton on June 7.

HAZELNUT WEEVIL (Balaninus obtusus Blanch.)

West Virginia

F. E. Brooks (June 24): Beetles issued from the soil at French Creek late in May and early in June. A normal infestation of hazelnut is indicated.

FILBERT BUD MITE (Eriophyes avellanae Nal.)

Connecticut

A. L. Quaintance (May 14): A letter from E. P. Felt reads as follows: "Mr. Bartlett has been growing filberts at Stamford for some years, and you may be interested in learning that the filbert bud mite of Europe is generally present, not only on Mr. Bartlett's bushes, but also on those of Dr.

Morris. In the case of the former, the mites may destroy as much as 25 per cent of the buds. The infestation is indicated by buds twice the normal size which fail to develop and finally dry up and drop off."

Oregon

A. L. Quaintance (June 8): Dr. Ewing informs me that the filbert bud mite has heretofore been known only from Oregon, where it is a pest of considerable importance.

WALNUT

BLACK WALNUT CURCULIO (Conotrachelus retentus Say)

West Virginia

F. E. Brooks (June 24): Beetles are ovipositing in the young fruits of the black walnut.

BUTTERNUT CURCULIO (Conotrachelus juglandis Lec.)

Pennsylvania

F. E. Brooks (June 24): Eggs and larvae were found in the leaf stems and tender shoots of Japanese walnut in a nursery on June 5. Injury was not serious, although oviposition was still under way.

PECAN

FALL WEBWORM (Hyphantria cunea Dru.)

Georgia

O. I. Snapp (June 25): A moderate infestation of pecan was observed today in several groves at Valdosta and Perry.

Alabama

J. M. Robinson (June 24): The fall webworm is attacking pecans over the southern and central parts of the State.

Mississippi

R. W. Harned (June 24): This insect was reported as very abundant and injuring pecan, hickory, persimmon, sweet gum, and other trees in all sections of the State.

PHYLLOXERA (Phylloxera spp.)

Mississippi

R. W. Harned (June 24): A great many complaints have been received during the past month regarding the abundance of Phylloxera galls on pecan trees. The specimens sent to this office for identification have proved to be either Phylloxera devastatrix Perg. or P. notabilis Perg. These specimens came from Warren, Panola, Pike, Bolivar, Copiah, Coahoma, Lowndes, and Madison Counties.

ALMONDS

CLOVER MITE (Bryobia praetiosa Koch)

California

Monthly News Letter, Los Angeles County Horticultural Commission, Vol. 11, No. 6, June 15: Almond orchards in the Antelope Valley have experienced one of their heaviest infestations of almond mites this spring. The Palm Ranch near Palmdale, which has some 200 acres of almonds, had an exceptionally heavy infestation. The mites had very favorable weather conditions for working.

CITRUS

MEDITERRANEAN FRUIT FLY (Ceratitis capitata Wied.)

General

Plant Quarantine and Control Administration (June 29): During the month the fruit fly has been found in many new localities and is now known to occur in the following fourteen counties: Orange, Seminole, Lake, Osceola, Brevard, Volusia, Flagler, St. Johns, Putnam, Marion, Sumter, Polk, Hillsboro, and Pinellas.

During June, infested fruit which came from Florida has been found at the following three places: Fort Worth, Tex., Raleigh, N. C., and Little Rock, Ark. (in addition to lot included in last report). All of this infested fruit was discovered between the first and sixth of the month, and although the inspection force has been greatly increased during June no other infested shipments have been reported.

In carrying out the eradication program outlined in the first edition of the federal quarantine, and included in subsequent editions of the state quarantine, host fruits and vegetables in the infested zones⁸ being destroyed and the removal of noncitrus hosts in the surrounding protective zones is under way. As required by the quarantine regulations, shipment of citrus fruits of the present crop from the entire State of Florida (except limes from Monroe and Dade Counties and other citrus fruit from approved cold storage plants) terminated on June 15. The shipment of other host fruits and vegetables from the protective zones, except those for which special extension (in some cases to June 30) was made, has been discontinued for the summer and fall.

California

Monthly News Letter, Los Angeles County Horticultural Commission, Vol. 11, No. 6, June 15: The Mediterranean fruit fly survey is now well under way in southern California, and plans for the project's organization were laid at a meeting in Los Angeles of all horticultural commissions of the southern counties. At a prior meeting of state and county officials, Mr. D. B. Mackie, State entomologist, was chosen to direct a State-side survey for the presence of the fly.

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WOOLLY WHITEFLY (Aleurothrixus howardi Quaint.)

Florida

J. R. Watson (June 23): The woolly whitefly is more common than for several years, but no commercial damage is being done. The parasite, Eretmocerus haldemani Howard apparently is not so efficient as usual.

A LEAF BEETLE (Trirhabda brevicollis Lec.)

Mississippi

R. T. Harned (June 24): Specimens of this insect were sent to this office on June 18 from Gulfport with the information that they had been injuring the foliage of orange trees.

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Texas

F. L. Thomas (June 25): The California red scale is very abundant in most of the Lower Rio Grande Valley.

TRUCK - CROP INSECTS

SEED CORN MAGGOT. (Hylemyia cilicrura Rond.)

New York

C. K. Crosby and assistants (June): This insect has been extremely destructive this spring to cucumbers and melons in Wayne, Niagara, Erie, and Chautauqua Counties.

Michigan

R. H. Pettit (June 18): I am sending today specimens of a fly that looks just like the adult of the bean maggot, from pickle fields at Holland, where they are reported to be present by the thousands. A year or two ago we bred adults of the bean maggot from cucumber plants in that district. (Determined by C. T. Greene.)

Wisconsin

E. L. Chambers (June 20): This insect is becoming a serious pest to corn and beans in many sections of the State, and each year more inquiries are being received concerning its control. Within the past month reports have been received from Racine, Kenosha, Milwaukee, Grant, Eau Claire, and La Crosse Counties.

Minnesota

A. G. Ruggles and assistants (June): Although a few records of injury to seed corn and seed potatoes have been received, this insect, on the whole, is attracting but little attention.

Iowa

C. J. Drake (June): The seed corn maggot is doing some commercial damage to onions in the vicinities of Davenport and St. Ansgar. The injury is confined largely to seedlings and the smaller onions. Other notes have been received during the month of attacks on corn and onions.

California

E. O. Essig (June 16): This insect is unusually common and destructive this spring to planted beans, corn, melons, etc., in many parts of the State.

C. K. Fisher (June 1): This insect was first reported by A. O. Larson on May 2 attacking beans. On May 31 a farmer from Modesto brought in sprouted blackeye beans which were badly damaged. He reported that many fields were badly damaged and that one farmer did not have more than a 5 per cent stand.

SOUTHERN GREEN STINK BUG (Nezara viridula L.)

Florida F. S. Chamberlin (June 22): The southern green stink bug is abundant and causing damage to tobacco in Gadsden County.

Mississippi R. W. Harned (June 24): The southern green stink bug was puncturing young tomatoes at Picayune and Carriere and causing them to fall May 24, and reports of injury to peas and beans were received from Lucedale on June 20.

MOLE CRICKETS (Scapteriscus spp.)

North Carolina B. B. Fulton (June 25): Scapteriscus acletus R. & H. is apparently increasing in abundance; it is causing injury to truck seedlings only in the southeastern corner of the State, but ranges as far north as White Lake, Willard, and Jacksonville.

South Carolina M. H. Brunson (May 27): Scapteriscus sp. has been very abundant and has damaged garden crops extensively at Lake City.

THRIPS (Thysanoptera)

New York Weekly News Letter, N. Y. State College of Agr., June 24: Suffolk County. Thrips are beginning to appear in the cauliflower seed beds. Genesee & Orleans Counties. Thrips are present in large numbers on Texas set onions.

GARDEN SLUGS (Mollusca)

Delaware H. L. Dozier (June 13): Injury by the striped garden slug Limax maximus L. to cultivated pansies and Dianthus at Wilmington was reported May 22.

Ohio E. W. Mendenhall (June 3): The garden slug Agriolimax agrestis L. is doing considerable damage to garden crops again this spring at Columbus.

POTATO AND TOMATO

ASH-GRAY BLISTER BEETLE (Macrobasis unicolor Kby.)

North Carolina R. W. Leiby (June 19): This blister beetle is seriously injuring Irish potato vines at several points in the western

(mountain) section of the State. We know this species only from the mountains in this State. Complaints in previous years were received in June and July.

Mississippi

R. W. Harned (June 24): This blister beetle was reported as causing serious injury to Irish potatoes at Dorsey on June 10.

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Pennsylvania

C. A. Thomas (June 22): The Colorado potato beetle has been very common in certain localities in southeastern Pennsylvania this summer, feeding on potato, tomato, and eggplant.

Maryland

F. M. Wadley (May 30): Adults have been seen occasionally in the last two weeks at Silver Spring, and today some small larvae were observed.

Florida

J. R. Watson (June 23): The Colorado potato beetle is moderately abundant on wild Solanum, as potatoes are gone.

Illinois

C. C. Compton (June): The Colorado potato beetle is moderately abundant in Cook County; hatching began June 10.

Minnesota

A. G. Ruggles and assistants (June): This insect is now putting in its appearance throughout the potato-growing sections of the State, and is already abundant in Hennepin, Blue Earth, Sibley, Aitkin, and Itasca Counties.

Wisconsin

E. L. Chambers (June 21): This insect is moderately abundant generally, but worse in Portage County, where spraying is not done with traction sprayers.

POTATO FLEA BEETLE (Epiditrix cucumeris Harr.)

Maryland

F. M. Wadley (June 1): Small black flea beetles were injuring potatoes at Silver Spring the middle of May.

Minnesota

C. G. Gaylord (June 12): The potato flea beetle is very abundant at Luverne, Rock County.

TOMATO STALK WEEVIL (Trichobaris mucorea Lec.)

Arizona

O. L. Barnes (June 24): This insect has been observed and reported in potato stalks in several plantings near Phoenix. In some cases the injury was severe, 25 to 50 per cent of the plants being infested. In one small potato planting at least half of the plants had been killed.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Virginia

T. J. Schoene (June 22): A few nymphs on succulent terminals have been observed.

- Minnesota A. G. Ruggles and assistants (June): The potato leafhopper has been reported as very abundant in Martin County and over most of the State; however, it is not yet present in numbers sufficient to be alarming.
- Wisconsin E. L. Chambers (June 21): This insect is moderately abundant generally, but worse in Waupaca and Oneida Counties.
- Iowa C. J. Drake (June): The potato leafhopper is moderately abundant over the State, especially in central and northern portions.

CABBAGE

CABBAGE MAGGOT (Hylemyia brassicae Bouché)

- New York C. R. Crosby and assistants (June): From 15 to 20 per cent of the early planted cauliflower in Erie County were killed by the cabbage maggot. The insect was also very abundant in early cabbage in Chautauqua and Ontario Counties.
- Wisconsin E. L. Chambers (June 20): Several large plantings of radishes in Dane and Milwaukee Counties, consisting of upward of 2 acres each, have been complete losses. Cabbage and cauliflower are suffering more than usual.

CABBAGE APHID (Brevicoryne brassicae L.)

- Nebraska M. H. Swenk (May 15-June 15): The first aphid to be complained of this spring on vegetables was the cabbage aphid. One grower in Johnson County lost 400 plants because of this aphid.
- Tennessee A. C. Morgan and assistants (June 26): Some of the fields of cabbage near Clarksville have had the yield reduced at least half by plant lice.

HARLEQUIN BUG (Murgantia histrionica Hahn)

- Mississippi R. W. Harned (June 24): The harlequin bug has caused serious damage to cabbage and collards at Fickett, Columbus, and Gulfport during the past few days.

STRIPED FLEA BEETLE (Phyllotreta vittata Fab.)

- New York Weekly News Letter, N. Y. State College of Agr., June 10: Wayne County. Flea beetles have been causing damage in unsprayed cabbage seed beds.
- Illinois C. C. Compton (June): This insect is very destructive in Cook County, feeding on cabbage seedlings in the field. Losses will be upwards of 50 per cent.

- Minnesota A. G. Ruggles and assistants (June): The cabbage flea beetle is very abundant; has done serious damage this spring.
- Mississippi R. W. Harned (June 24): Flea beetles were very abundant on collards at Durant on June 10.

STRAWBERRY

STRAWBERRY WEEVIL (Anthonomus signatus Say)

- Minnesota A. G. Ruggles and assistants (June): The strawberry weevil is very abundant; it did serious damage this spring.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

- Massachusetts A. I. Bourne (June 24): Asparagus beetles appeared May 26 and 28 in moderate abundance.
- New York C. R. Crosby and assistants (June): C. asparagi L. and C. duodecimpunctata L. are doing considerable damage on many plantations in Chautauqua County.
- South Carolina M. H. Brunson (June 25): The asparagus beetle continues to damage asparagus in restricted areas in Barnwell, Bamberg, and Orangeburg Counties.

BEANS

LIMA BEAN VINE BORER (Monoptilota pergratialis Hulst)

- Mississippi R. W. Harned (June 24): The lima bean vine borer was found injuring lima beans at Amory on June 11.

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

- New York C. R. Crosby (June 15): Adults were found in considerable abundance in hibernation in Erie County.
- Pennsylvania C. A. Thomas (June 22): The Mexican bean beetle was found in large numbers in early June attacking bush lima beans at Coatesville, Chester County.
- T. L. Guyton (June 26): This insect is very abundant at Harrisburg.
- Delaware H. L. Dozier (June 13): The Mexican bean beetle was just

starting actively to attack lima beans on May 24 at Felton. The first eggs of the season were observed hatching at Newark on June 21.

Maryland F. M. Wadley (June 1): Adults on beans at Silver Spring are causing some injury.

Virginia W. J. Schoene (June 22): This insect is attracting attention over the State. The adults have caused serious damage.

N. F. Howard (May 26): On May 26 over 32 per cent of the beetles placed in hibernation cages at Arlington Farm had emerged. This is probably a high record for the eastern and southeastern United States.

North Carolina C. A. Brannon (June 25): The Mexican bean beetle is causing severe injury all over the State.

South Carolina M. H. Brunson (June 25): This insect is very abundant and destructive, especially in the eastern half of the State.

Ohio N. F. Howard (May 31): The average survival from seven cages in two sections of Ohio to date is slightly under 1.5 per cent, which for this section is high.

Alabama J. M. Robinson (June 25): This insect is very abundant; it has ruined all snap beans in infested areas in northeastern Alabama. It is more destructive than in any year since its coming into the State. It seems to be adjusting itself to the lower altitudes. A very interesting thing, however, is that Stiretrus anchorago personatus Germ. has been feeding on both the larvae and adults.

Mississippi R. W. Harned (June 24): This insect is causing considerable damage in several northeastern counties; found for the first time in Lowndes and Tippah Counties.

New Mexico J. R. Douglass (June 6): One Mexican bean beetle was found on beans in the foothills of Estancia Valley on June 1. Subsequent scouting showed that they had appeared in canyon fields along the western edge of the valley. This is 10 days ahead of the earliest appearance, in the field, on record. Surveys of the middle Rio Grande Valley in New Mexico on June 5 showed that the beetles had recently entered the fields.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

South Carolina M. H. Brunson (June 25): Cowpeas at Clemson College have been seriously injured, but the insect is now on the decline.

Ohio E. W. Mendenhall (June): This insect is quite bad on young beans just coming up at Springfield.

Mississippi

R. W. Harned (June 24): Dr. M. R. Smith reports that the bean leaf beetle is doing considerable damage to snap and pole beans in many localities in the vicinity of A. & M. College. In some instances the work is strikingly similar to that of the Mexican bean beetle. Even the pods are being gnawed into. He states that the injury from these insects seems to be much worse in grassy gardens than in well cultivated ones. Specimens of this species have also been received from Houston, Chickasaw County.

A WEEVIL (Sternechus paludatus Casey)

New Mexico

J. R. Douglass (June 6): A bean stalk borer Sternechus paludatus Casey, has recently issued from winter quarters and at the present is ovipositing in young bean plants in the foothills of the Estancia Valley. The larvae feed in the stems and stalks of the bean plants.

CUCUMBERS AND MELONS

MELON APHID (Aphis gossypii Glov.)

Wisconsin

E. L. Chambers (June 21): This aphid is very abundant on cucumbers over the State.

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Illinois

C. C. Compton (June): The striped cucumber beetle is very abundant; several hundred acres of pickles in Cook County showed up injury which was augmented by late frosts.

Minnesota

A. G. Ruggles and assistants (June): The striped cucumber beetle was just beginning to put in its appearance during the early part of the month, and by the middle of the month it was moderately abundant over the southern third of the State. It was reported as very abundant from Hennepin, Martin, Goodhue, and Blue Earth Counties.

Iowa

C. J. Drake (June): This insect is very abundant in central and southern Iowa.

A BEETLE (Strigoderma arboricola Fab.)

Maryland

L. M. Feairs (June 25): I am enclosing two specimens of a beetle which came from Hurlock, where it has been damaging the blossoms of cantaloupe and other plants. Descriptions of the work and the habits of the beetle sound very much like that of the Japanese beetle. These specimens were collected by Mr. P. S. Fieger. (Determined by E. A. Chapin.)

IMBRICATED SNOOUT BEETLE (Epicaerus imbricatus Say)

Nebraska

W. H. Swenk (May 15-June 15): The imbricated snout beetle was found destroying young watermelon vines in Buffalo County on June 10.

ONIONS

ONION THRIPS (Thrips tabaci L.)

Iowa

C. J. Drake (June): The onion thrips is becoming very abundant on onions at Ames, Davenport, Clear Lake, and St. Ansgar.

ONION MAGGOT (Hylemyia antiqua Meig.)

New York

C. R. Crosby and assistants (June): The onion maggot put in its appearance in the western New York onion sections during the first week in June and did some damage. It has been reported from Chautauqua, Genesee, and Orleans Counties, though not serious.

Indiana

J. J. Davis (June 27): Reported early in the month from Shelby, Albion, Napanee, and Pierceton. By the 20th of the month large areas had been destroyed in some fields.

Illinois

C. C. Compton (June): The onion maggot is very destructive to set onions in Cook County. Late-planted onions are the least infested, which is the reverse of normal conditions.

Minnesota

A. G. Ruggles and assistants (June): The onion maggot was reported as very abundant in Hennepin, Houston, and Ramsey Counties.

Iowa

C. J. Drake (June): The onion maggot is doing some commercial damage to onions in the vicinities of Davenport and St. Ansgar. The injury is confined to seedlings and the smaller onions.

SUGAR BEET

BET LEAFHOPPER (Eutettix tenellus Baker)

Utah

G. F. Knowlton (June 4): The beet leafhopper is fairly abundant at Promontory and just west of Snowville, but less abundant in Tooele County. A few half-grown nymphs have been collected at Snowville and Promontory.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Utah

G. F. Knowlton (June 5): Black flea beetles are abundant in the sugar-beet fields of Cache County and slight to moderate damage is occurring in all fields. More damage was noted at

Hyde Park, Richmond, Lewiston, and Cornish than in other towns in the valley.

BANDED FLEA BEETLE (Systema taeniata Say)

Utah G. F. Knowlton (June 7): The banded flea beetle is rather abundant in certain fields in North Ogden and at Five Points and less abundant in most parts of northern Utah.

SUGAR BEET ROOT MAGGOT (Tetanops aldrichi Hendel)

Utah G. F. Knowlton (May 23): Adult flies of the sugar beet root maggot were quite abundant in one field at West Point and present in a few fields at Hooper, Clinton, and Syracuse. (June 5): The adults are now very abundant at Cornish and Trenton, but less abundant at Lewiston and Amalga. The females contain well developed eggs and are mating. During the heat of the day the flies seek shelter under clods, leaves, and the shady sides of fence posts.

SPINACH LEAF MINER (Pegomyia hyoscyami Panz.)

New York C. R. Crosby and assistants (June): The spinach leaf miner was making its first appearance about the middle of June in western New York.

Utah G. F. Knowlton (June 7): Present throughout the beet districts of Weber County and northern Davis County. The maggots are one-third to two-thirds grown. Not enough leaves are affected to be noticeable.

FALSE CHINCH BUG (Nysius ericae Schill.)

Arizona O. L. Barnes (June 24): Several complaints have been made to us about the large numbers, and to some extent, the damage caused by the false chinch bug. This insect has been more abundant than for several years. Injuries to young citrus trees, castor bean plants, and watermelon plants have been observed during the past month. The bugs have usually damaged plants over small areas but the infested plants are usually killed. These insects often appear in large numbers and almost cover the surfaces of houses and other buildings. On a pump house near the center of an infestation we saw cast nymphal skins to a depth of 3 inches. Wild mustard, a favored host plant, was growing on three sides of the pump house. It has been reported from the Salt River Valley only.

Utah G. F. Knowlton (June 5): The false chinch bug is less abundant in the beet fields than usual at this time of the year, but more abundant on roadside weeds.

SWEET POTATO

WHITE-LINED SPHINX (Celeria lineata Fab.)

Mississippi R. W. Harned (June 24): What are possibly the larvae of the white-lined sphinx, were found injuring sweet potato plants at Lucedale on May 8.

ARGUS TORTOISE BEETLE (Chelymorpha cassidea Fab.)

Mississippi R. W. Harned (June 24): Larvae and pupae of the tortoise beetle were collected on May 24 on sweet potato plants at Biloxi, where some injury had been done.

SWEET-POTATO LEAF BEETLE (Typophorus viridicyaneus Cr.)

North Carolina B. B. Fulton (June 25): Feeding abundantly on leaves of sweet potato in Currituck County. It has apparently caused injury in previous years.

RHUBARB

RHUBARB CURCULIO (Lixus concavus Say)

Ohio E. W. Mendenhall (June 10): I found a very serious outbreak of the rhubarb curculio in Columbus; the plantings were nearly destroyed.

MUSHROOMS

Pennsylvania C. A. Thomas (June 22): The following insects have been common and somewhat injurious in mushroom houses in Chester County this spring: Lepidocyrtus cyaneus Tullb., Achorutes armatus Nic., tyroglyphids and other mites, and sciarid flies.

S O U T H E R N F I E L D - C R O P I N S E C T S

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

North Carolina C. H. Brannon (June 20): The flea beetle has seriously injured tobacco in most sections owing to the delayed, cool spring.

Florida F. S. Chamberlin (June 24): The third brood of the flea beetle is very abundant in tobacco fields where control practices have been slighted. Poison applications have prevented serious damage in most cases.

Tennessee

A. C. Morgan and assistants (June 26): The tobacco flea beetle was not so numerous as usual on plant beds and is doing very little injury on young plants in the field.

TOBACCO HORNWORMS (Protoparce spp.)

North Carolina

C.H. Brannon (June 20): Tobacco hornworms are causing very severe damage in tobacco fields over the entire State.

Tennessee

A. C. Morgan and assistants (June 26): The moths of P. quinquemaculata Haw. and P. sexta Joh. are moderately numerous and the early infestation of larvae is greater than last year.

TOBACCO BUDWORM (Heliothis virescens Fab.)

North Carolina

C. H. Brannon (June 20): Tobacco budworm injury is widespread over the tobacco sections. This pest causes tremendous damage to tobacco when no control measures are used.

CORN ROOT WEBWORM (Crambus caliginosellus Clem.)

Tennessee

A. C. Morgan and assistants (June 26): This insect is moderately injurious to tobacco near Clarksville.

GREEN JUNE BEETLE (Cotinis nitida L.)

Tennessee

A. C. Morgan and assistants (June 26): This grub seriously injured the early planting on about 300 acres of tobacco in the northern part of Montgomery County.

F O R E S T A N D S H A D E - T R E E I N S E C T S

A correction - The note on Chrysomphalus tenebricosus Comst. by J. E. McEvilly, of Mississippi, in Insect Pest Survey Bulletin, Vol. 9, No. 4, p. 145, should have been C. obscurus Comst.

PERIODICAL CICADA (Tibicina septendecim L.)

Ohio

J. S. Houser (June 18): I wish to report that in company with H. F. Deitz, I heard two individuals of the 17-year locust singing at Wooster on June 15.

Illinois

W. P. Flint (June 19): We have received definite records of adults of Brood III of the periodical cicada from Pike, Cass, Schuyler, Montgomery, Hancock, and Knox Counties. At some points, especially in Knox County, adults were reported as being very numerous.

Iowa

C. J. Drake (June): The 17-year locust has appeared in large numbers in a number of counties, but they are confined

largely to colonies here and there in lowlands along wooded areas, particularly along streams.

GYPSY MOTH (Porthetria dispar L.)

New England

C. W. Collins (June 25): Men connected with the gypsy moth laboratory began to report on June 18-20 that stripping by the moth was beginning to show up in woodlands and orchards not sprayed. So far, reports have been received of stripping in several towns in the northern section of Middlesex County and the eastern part of Worcester County, Massachusetts, and in southern New Hampshire in Hillsboro and Rockingham Counties.

New Hampshire

P. R. Lowry (June 25): The gypsy moth is more common this year than for the past several seasons at Durham.

BROWN-TAIL MOTH (Nygmia phaeorrhoea Don.)

Maine

H. B. Peirson (May 25): The brown-tail moth is very abundant on apple at Augusta. Foliage not out and the caterpillars swarming into houses.

New Hampshire

P. R. Lowry (June 25): The brown-tail moth is more abundant at Durham than for the past several seasons.

New England

C. W. Collins (June 25): Infestations still persist in southern Maine and southern New Hampshire; defoliation occurring in neglected apple orchards.

SATIN MOTH (Stilpnotia salicis L.)

New England

C. W. Collins (June 25): Satin-moth conditons seem to be much improved over previous years, and there is less defoliation. Some stripping noted, especially on isolated willows. Reports of defoliation of willow and poplar trees have been received from southern Maine and southern New Hampshire.

New Hampshire

P. R. Lowry (June 25): The satin moth is becoming more common every year. This year I have seen more on the native poplars outside the towns than ever before; saw the first larvae spinning up for pupation on June 23.

CECROPIA MOTH (Samia cecropia L.)

North Dakota

J. A. Munro (June 25): The cecropia moth is more abundant than usual this year. Specimens have been received from various parts of the State.

WHITE-MARKED TUSSOCK MOTH (Hemerocampa leucostigma S. & A.)

Washington, D.C.

J. A. Hyslop (June 26): Larvae are numerous on various shade trees in the public parks in Washington, D. C., but doing no noticeable damage.

Ohio E. W. Mendenhall (June 27): I find larvae working on the linden, maple, and elm trees in the parks of Dayton.

FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Massachusetts J. V. Schaffner, jr (June 25): The forest tent caterpillar was common in oak woodland in many localities in eastern Massachusetts.

Minnesota A. G. Ruggles and assistants (June 22): This insect is very abundant in east-central Minnesota.

BAG WORM (Thyridopteryx ephemeraeformis Haw.)

Delaware H. L. Dozier (June 13): Dr. J. F. Adams reported a heavy infestation of bagworms on 9-year-old Yellow Transparent apple trees at Bridgeville on March 27. There were from 12 to 24 bags per tree on about 60 trees adjacent to a road dividing apples from peaches.

Ohio E. W. Mendenhall (June 27): The bagworm is beginning to work and is quite noticeable on the elms and other shade trees in Dayton.

Mississippi R. W. Harned (June 24): Bagworms were abundant on linden trees at Holly Spring (June 10) and on arborvitae plants at Wicayune (May 23).

FALL CANKER WORM (Alsophila pometaria Harr.)

Rhode Island J. V. Schaffner, jr. (June 25): Reports of heavy infestation of apple, oak, and birch trees in the vicinity of Cranston and Westerly have been received.

Connecticut T. E. Britton (June 22): This insect has been reported from Middlesex and New London Counties attacking apple and woodland trees, but stripping is not so severe as last year.

P. Garman (June 24): The fall canker worm has been reported as attacking apple in New Haven County, but it is less abundant than last year.

Pennsylvania T. L. Guyton (June 26): I would like to report the presence of the fall canker worm in Somerset County.

Wisconsin E. L. Chambers (June 20): Many trees have been almost completely defoliated by this pest in Jefferson, Dodge, Fond du Lac, and Monroe Counties. Of elm, poplar, oak, and apple, apple was the most seriously affected.

Minnesota A. G. Ruggles and assistants (June): This insect is very abundant in east-central Minnesota.

North Dakota

J. A. Munro (June 25): The fall canker worm has caused serious damage during the first half of June to trees at Mandan and Fargo according to observations made from this office. Reports indicate that this pest is prevalent in other parts of the State including Minot, Grand Forks, and Fairmont.

Kansas

J. W. McColloch (June 10): Injury to elms by canker worms is reported from Topeka and Natoma.

SPRING CANKER WORM (Paleacrita vernata Peck)

Pennsylvania

T. L. Guyton (June 26): I would like to report the presence of the spring canker worm over a large area in the northwestern part of the State. I made note of it in the following counties between June 20 and 25: Butler, Crawford, Mercer, McKean, Jefferson, and Clearfield. The survey was made from main travelled highways, and I can not speak for the occurrence over the entire areas of the counties named.

A PSOCID (Cerastipsocus venosus Burm.)

North Carolina

R.W. Leiby (June 19): This insect is unusually prevalent over the State in large numbers. Its interesting habits are the subject of frequent inquiries. It is reported as infesting trunks and branches of many kinds of trees.

PUTNAM'S SCALE (Aspidiotus ancylus Putn.)

South Dakota

H. C. Severin (June 24): This insect has been sent in many times during the past month from the eastern third of the State, where it was reported as attacking poplar, willow and plum.

BIRCH

BIRCH LEAF-MINING SAWFLY (Phyllotoma nemorata Fallen)

Maine

H. B. Peirson (June 6): The birch leaf-mining sawfly is a real threat to the white birch of New England; there is a very heavy infestation in central and south-central Maine.

BRONZE BIRCH BORER (Agrilus anxius Gory)

Ohio

E. W. Mendenhall (June 13): The bronze birch borer is very bad and destructive to the birch trees on streets, parks, and private estates in Oakwood, a suburb of Dayton. There are many fine trees that look like they are doomed; about 75 per cent are affected.

BIRCH LEAF MINER (Fenusa pumila Klug)

Massachusetts J. V. Schaffner, jr. (June 25): Larvae are present throughout eastern Massachusetts wherever gray birch is grown.

BOXELDER

BOXELDER APHID (Periphyllus negundinis Thos.)

South Dakota H. C. Severin (June 24): This insect is unusually abundant on boxelder in the eastern part of the State.

Nebraska M. H. Swenk (May 15-June 15): The boxelder aphid was reported from northeastern Nebraska during the last week in May.

CEDAR

DEODAR WEEVIL (Pissodes deodarae Hopk.)

Mississippi R. W. Harned (June 24): On June 21 County Agent T. R. Lominick sent to us from Vicksburg some Cedrus deodara twigs that had evidently been injured by the deodar weevil. He stated that he had not noticed injury of this nature to these plants in Vicksburg until this year.

ELM

ELM LEAF MINER (Kaliosysphinga ulmi Sund.)

New Hampshire P. R. Lowry (June 25): The elm leaf miner is severely injuring a camperdown elm at Enfield. Most of the mines are still quite small.

A LEAF BEETLE (Calligrapha scalaris Lec.)

Kansas G. A. Dean (June 3): The larva of this species is reported as defoliating elms at Glen Elder; adults were also present on the trees.

A CECIDOMYIID (Phytophaga ulmi Beut.)

Minnesota A. G. Ruggles (June 20): That is probably P. ulmi has been reported as very destructive to all young elms at Newport.

EUROPEAN ELM SCALE (Gossyparia spuria Modeer)

New Hampshire P. R. Lowry (June 25): The European elm scale is very common on several small elms at Durham; hatching of eggs began on June 20.

Illinois

W. P. Flint (June 19): This insect is being reported from several localities in the central part of the State, and is apparently increasing generally in Illinois. No serious injury to trees has been reported, although a number of elms in the vicinity of Chicago and Urbana show a rather heavy infestation.

Nebraska

M. H. Swenk (May 15-June 15): An additional report of the European elm scale was received from Redwillow County (McCook) during the first week in June.

ELM SCURFY SCALE (Chionaspis americana Johns.)

South Dakota

H. C. Severin (June 24): The elm scurfy scale has been reported as doing severe damage to elms in eastern South Dakota.

HICKORY

A PHYLLOXERA (Phylloxera sp.)

Pennsylvania

C. A. Thomas (June 22): Call aphids, Phylloxera sp., have caused disfigurement of a number of hickory trees on an estate near Kennett Square, Chester County, by causing innumerable galls to form on the petioles and small branches.

LARCH

LARCH CASE BEARER (Coleophora laricella Hbn.)

Maine

H. B. Peirson (June 6): A heavy infestation on larch near Augusta has been reported. We have not been able to raise any parasites. Climatic conditions seem to have a strong influence on the abundance of this pest.

LARCH SAWFLY (Nematus erichsoni Hartig)

North Dakota

J. A. Munro (June 25): June 20 a planting of larch at Mandan, Norton County, was found to be infested with the larvae of the larch sawfly. The following day an arsenical spray was applied with the result that most of the worms were killed. Horticulturists at Mandan told me that they knew of no other larch plantings within a radius of 150 miles and that they were at a loss as to how the insect became established there.

WOOLLY LARCH APHID (Chermes strobilobius Kalt.)

Connecticut

R. B. Friend (June 3): This insect is more abundant than usual on European larches at Middlebury.

MAPLE

MAPLE BLADDER GALL (Phyllocoptes quadripes Shim.)

Ohio E. W. Mendenhall (June 12): Galls are quite abundant on some of the soft maples in Tippecanoe City, Miami County.

Indiana J. J. Davis (June 27): Bladder maple gall reported abundant on maple leaves at Ray on June 9.

WOOLLY MAPLE LEAF APHID (Pemphigus acerifolii Riley)

North Carolina R. W. Leiby (June 19): The woolly maple aphid has been extremely abundant, especially in the Piedmont section, and the subject of very frequent complaints.

WOOLLY ALDER APHID (Prociphilus tessellatus Fitch)

North Carolina C. H. Brannon (June 15): This insect has been unusually abundant, having been reported from all parts of the State as attacking soft maples.

NORWAY MAPLE APHID (Periphyllus lyropictus Kess.)

New York G. M. Coddington (June 15): In many localities in Westchester County the ground is completely covered with leaves from the maple trees. Aphids are the main cause of the leaves dropping.

Pennsylvania C. A. Thomas (June 22): The Norway maple aphid is causing considerable defoliation of maples in southeastern Pennsylvania. Syrphid larvae and coccinellids are common feeding on the aphids.

Ohio E. W. Mendenhall (June 11): Norway maples are badly infested with aphids in Dayton and vicinity. The leaves are sticky with honeydew.

Indiana J. J. Davis (June 27): Abundant on Norway maple at Fort Wayne, Woodburn, and LaFayette. All reports between June 20 and 26.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

South Carolina M. H. Brunson (June 6): The cottony maple scale has been reported as attacking maples at Pelzer.

Indiana J. J. Davis (June 27): This insect has been reported thus far from Francisville, Parker, Plymouth, Garrett, Tipton, and Frankfort. All cases, except one on grape, were reported on maple.

PINE

PINE BARK APHID (Chermes pinicorticis Fitch)

Minnesota A. G. Ruggles and assistants (June): The pine bark aphid is very abundant.

SOUTHERN PINE BEETLE (Dendroctonus frontalis Zimm.)

South Carolina M. H. Brunson (May 30): The pine bark beetle has killed several pines at Aiken.

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Connecticut R. B. Friend (May 21): Larvae are abundant in young red-pine plantations near Hamden.

PINE LEAF SCALE (Chionaspis pinifoliae Fitch)

Ohio E. W. Mendenhall (May 29): I find Mugho pine in a nursery at Mt. Vernon infested with the pine leaf scale.

Nebraska M. H. Swenk (May 15-June 15): Complaints of injury by the pine leaf scale continued to be received all through May, one report coming from as far west as Hitchcock County.

POPLAR

COTTONWOOD LEAF BEETLE (Lina scripta Fab.)

Mississippi R. W. Harned (June 24): Injury to poplar trees by Melasoma scripta was reported on June 18 from Moss Point.

SPRUCE

SPRUCE BUDWORM (Harmologa fumiferana Clem.)

Wisconsin E. L. Chambers (June 21): The spruce budworm is moderately abundant in Jefferson, Milwaukee, and Fond du Lac Counties, according to reports.

Minnesota A. G. Ruggles and assistants (June): Although observed as somewhat abundant about St. Paul, this insect is attracting but little attention.

South Dakota H. C. Severin (June 24): The spruce budworm is very abundant on spruce at Arlington. This is the second outbreak we have had in my experience.

SPRUCE BUD SCALE (Physokermes piceae Schrank)

Minnesota

K. A. Kirkpatrick (June 18): A scale on spruce trees has been noted and a number of complaints have been received.

INSECTS ATTACKING GREENHOUSE
AND ORNAMENTAL PLANTS

RED SPIDER (Tetranychus telarius L.)

New York

C. R. Crosby (June 15): The red spider is badly infesting pepper seedlings in a greenhouse in Erie County.

North Carolina

C. H. Brannon (June 25): Many flower gardens over the State are heavily infested.

Indiana

J. J. Davis (June 27): Red spider was abundant on phlox at Goldsmith (June 3), and on evergreens at Carlisle (June 6).

Nebraska

M. H. Swenk (May 15-June 15): Red spiders resumed their troublesome attacks on evergreens during the period here covered. The first new work was on Thuja orientalis in Dodge County on May 28. Serious injury to Black Hills spruce in Saline County had taken place by June 12.

Kansas

J. W. McColloch (June 18): Serious damage to cedars has been reported from Manhattan, Blue Rapids, and Wakefield.

TORTOISE BEETLES (Cassidinae)

Wisconsin

E. L. Chambers (June 20): Our correspondence indicates that this pest is unusually prevalent and our nursery inspectors have been having their attention called to it frequently as attacking Japanese lantern plants in southeastern counties.

LONG SOFT SCALE (Coccus elongatus Sign.)

Ohio

E. W. Mendenhall (June 10): The Euphorbia plants in one of the greenhouses at Painesville are badly infested with the long soft scale, which is doing considerable damage.

CANNA

LARGER CANNA LEAF-ROLLER (Calpodes ethlius Cram.)

Mississippi

R. W. Harned (June 24): Serious injury to cannas at Hattiesburg and Lucedale by the larger canna leaf-roller was reported on June 19 and May 22.

LESSER CANNA LEAF-ROLLER (Geshna cannalis Quaint.)

Mississippi

R. W. Harned (June 24): Serious injury to cannas by the lesser canna leaf roller was reported on June 19 from McComb.

DAHLIA

A WEEVIL (Apion metallicum Gerst.)

Mississippi

R. W. Harned (May 23): Weevils were collected at Moss Point on May 15 by R. P. Colmer, who reports that they were perforating the leaves of dahlia plants. (Identified by L.L.Buchanan.)

SUGAR BEET THRIPS (Heliothrips femoralis Heeger)

Delaware

H. L. Dozier (June 13): Very abundant in the University greenhouse at Newark during May and early June, seriously injuring young dahlia cuttings, impatiens, etc.

IRIS

A BLISTER BEETLE (Epicauta ferruginea Say)

Mississippi

R. W. Harned (June 24): Blister beetles were found injuring iris at Aberdeen on June 14.

IRIS BORER (Macronoctua onusta Grote)

Wisconsin

E. L. Chambers (June 20): Several small patches of iris have been observed infested 100 per cent with the borer and it is appearing in more plantings each summer. Reports have been received from Jefferson, Milwaukee, Dane, and Racine Counties.

IVY

SOFT SCALE (Coccus hesperidum L.)

Ohio

E. W. Mendenhall (June 22): Infesting English ivy in a greenhouse at Springfield and doing considerable damage.

EIGHT-SPOTTED FORESTER (Alypia octomaculata Fab.)

Indiana

J. J. Davis (June 27): Larvae were abundant and defoliating ivy at Hammond in 1928. This year the moths were observed about ivy vines on June 18.

LILAC

LILAC LEAF MINER (Gracilaria syringella Fab.)

Minnesota

A. G. Ruggles (June 20): The lilac leaf miner is extremely abundant and doing much damage in Ramsey and Hennepin Counties.

OLEANDER

POLKA-DOT WART MOTH (Syntomeida epilais Walk.)

Florida

J. R. Watson (June 23): Larvae of the polka-dot wart moth have been defoliating oleander on the lower eastern coast.

PRIVET

A LEAF ROLLER (Cacoecia rosana L.)

Massachusetts

J. V. Schaffner, jr. (June 25): These were abundant the last of May and early in June, especially in California privet in towns and cities around Melrose. It was necessary for many property owners to spray their hedges to protect them.

RUSTY LEAF MITE (Phyllocoptes schlectendali Nal.)

Connecticut

W. E. Britton (June 22): This insect is more abundant on California privet in New Haven than I have ever seen it.

ROSE

APHIDS (Aphidae)

Minnesota

A. G. Ruggles and assistants (June): Aphids have been reported as very abundant on roses and other ornamentals in Traverse and Chippewa Counties and very abundant on buckthorn in east-central Minnesota.

ROSE SAWFLY (Caliroa aethiops Fab.)

Delaware

H. L. Dozier (June 13): Rose slugs were first noticed this year at Newark on May 17.

Nebraska

M. H. Swenk (May 15-June 15): The rose slug was unusually injurious to rose over eastern Nebraska, west in the Platte Valley to Kearney and Buffalo Counties during the first week in June.

ROSE CURCULIO (Rhynchites bicolor Fab.)

North Dakota

J. A. Munro (June 25): As usual the rose curculio is very abundant. The injury which it causes to rose buds makes the growing of roses very difficult. It attacks the developing buds of either the cultivated or wild rose.

ROSE CHAFER (Macrodactylus subspinosus Fab.)

Delaware

H. L. Dozier (June 13): The rose chafer appeared about May 28 at Newark and are very serious at the present time attacking rose, peonies, grapes, etc., showing a decided preference for the white flowering varieties.

Indiana

J. J. Davis (June 27): Rose beetles were feeding on foliage and green apples at Silver Lake June 13, peaches, rose, cherry, plum, and grape at Terre Haute June 7, "by millions and eating everything" at Hobart June 20, and at Plymouth June 25 where it damaged apple trees. In one case a report of injury to young chickens was reported.

Nebraska

M. H. Swenk (May 15-June 15): The rose chafer was first observed this season in Bagline County on June 7. Each year these beetles appear in large numbers in the sandhill region of Nebraska and cause much loss and annoyance to the ranchmen and farmers of that region.

SUNFLOWER

A CERAMBYCID (Mecas inornata Say)

Mississippi

R. W. Harned (June 19): On June 3 a correspondent at Carrollton sent to this office two cerambycid beetles that were identified by J. M. Langston as M. inornata. The correspondent wrote as follows: "I have a small patch of mammoth Russian sunflowers now 2 or 3 feet tall. An insect has attacked them and apparently the whole patch will be destroyed. I can kill or chase all of them out of the patch and in an hour they are back again. They work during the middle of the day by girdling the plants 6 or 8 inches below the top; the plants die immediately."

VERBENA

MARGUERITE LEAF MINER (Phytomyza chrysanthemi Kowarz)

Mississippi

R. W. Harned (June 24): Serious injury to verbena plants was reported on June 11 from Duncan.

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicidae)

Alabama J. M. Robinson (June 25): Mosquitoes are appearing in unusual numbers.

Haiti R. C. Smith (May 26): This is the rainy season and mosquitoes are very abundant at Port-au-Prince. They are exceedingly annoying in houses. Last week they were so annoying in a cotton field that we were forced to leave. The malarial index is rising according to the monthly report of the Service of Agriculture. Aedes sollicitans Walk. and other species are represented.

CHIGGER (Trombicula irritans Riley)

Kansas R. L. Parker (June 20): Chiggers have been reported attacking people near Topeka and Manhattan, but in less numbers than last year.

RAT MITE (Liponyssus bacoti Hirst)

Texas W. E. Dove.- During the winter and spring months, the tropical rat mite caused numerous persons to report to physicians for treatment of rat mite dermatitis. Often the cause of several papules was attributed to the bites of a single mite. In one instance such skin lesions were so numerous on the body of a child that the premises were quarantined for chicken pox. As far north as Sherman this species is apparently well established. Mites have been collected in a dining room and in wash rooms used by the public. There are indications that dispersion may take place at least in part by the travels of persons.

SAND FLIES (Culicoides sp.)

Maryland W. E. Dove (May 20): Specimens of these biting midges were collected at Baltimore on May 20. And during early spring they were annoying to man in this vicinity.

CATTLE

CATTLE GRUBS (Hypoderma spp.)

Vermont F. C. Bishopp and H. S. Peters (June 20): Cattle grubs are moderately abundant for this late date, although they are said

to be less numerous on cattle this spring than for several years. The average number per head in 452 milk cows examined was 2.2. The grubs are maturing rapidly and leaving the cattle. H. bovis DeG. is still appearing in the subcutaneous tissues of the backs. Cattle are being greatly annoyed by heel fly attacks. Some herds are refusing to go out to pasture on account of their fear. H. lineatum De Vill. is still present in the backs of a number of cows in most herds. Lesions of penetration of the young grubs of this species are numerous and dairymen are complaining of the swellings from this cause along the escutcheons of the cows. At Montpelier there were 84 cows examined which showed an average of 1.5 grubs per head.

New Hampshire F. C. Bishopp and H. S. Peters (June 19): An average of .9 grubs per head was obtained by examination of 126 cows at Littleton.

HORN FLY (Haematobia irritans L.)

Vermont F. C. Bishopp and H. S. Peters (June 20): Horn flies are causing some annoyance to dairy cattle in north-central Vermont. Most farmers are now using fly sprays; some began spraying about June 10. In unsprayed herds the number of horn flies per animal ranges from 25 to 1,500.

Missouri L. Haseman (June): Horn flies are unusually abundant; the heaviest infestations that I have ever known for June.

HORSES

HORSE FLY (Tabanus lasiophthalmus Macq.)

New York F. C. Bishopp and H. S. Peters (June 12): Horse flies are causing much annoyance to horses and dairy cattle near Fort Jarvis. Stock kept from grazing during much of the day from the combined attacks of these flies and Hypoderma spp. These flies number from 2 to 10 per head.

Vermont F. C. Bishopp and H. S. Peters (June 20): Tabanids are annoying dairy cattle much in low-lying pastures in the vicinity of Burlington.

Pennsylvania F. C. Bishopp and H. S. Peters (June 11): Cattle are greatly annoyed until nearly dark in the vicinity of Weatherly. There are from 1 to 10 tabanids attacking each animal in a herd near here.

POULTRY

BUFFALO GNATS (Simuliidae)

Michigan

R. H. Pettit (June 3): I received this morning several specimens of Simulium from a location about 30 miles north of Grand Rapids. These flies are appearing in swarms and attacking ducks and chickens. They are reported to be quite troublesome, sucking blood as they do and disturbing the birds. This is, so far as I know, the first time that Simulium has ever been found in Michigan attacking birds. (Identified by C. T. Greene as Simulium vittatum Velt.)

Iowa

C. N. Ainslie (June 5): These gnats (Eusimulium sp.) have been a pest in northwestern Iowa for several weeks, tormenting people and attacking young chickens and turkeys. It is reported that one poultryman lost 600 young chickens from these gnats and that other smaller losses have been reported. They are supposed to have been bred in the side waters of the Missouri.

FOWL TICK (Argas miniatus Koch)

New Mexico

J. R. Douglass (June 6): Complaints of the fowl tick, sometimes called blue bug, have been received from Estancia, where it was attacking poultry.

HOGS

HOG MANGE MITE (Sarcoptes scabiei suis DeG.)

Nebraska

M. H. Swenk (May 15-June 15): A Butler County correspondent reported that his hogs were badly infested with S. suis.

H O U S E H O L D I N S E C T S

ANTS (Formicidae)

South Carolina

M. H. Brunson (June): A house at Winnsboro has been considerably damaged by Camponotus herculeanus pennsylvanicus DeG.

Nebraska

M. H. Swenk (May 15-June 15): The mound-building ant, Pogonomyrmex occidentalis Cress. was reported as troublesome from western counties during the period here covered. It was reported from Deuel County on May 11. Formica rufa L. has been unusually plentiful and troublesome in Rock County. In eastern Nebraska, F. fusca L. has been especially troublesome in the lawns and gardens and sometimes as invaders of houses. These complaints have been received numerously from Douglas, Lancaster, and other eastern counties, west to Rock, Buffalo, and Franklin Counties.

Mississippi

R. W. Harned (June 24): Dr. M. R. Smith reports that the tiny black ant, Monomorium minimum Buckl., seems to be quite a pest in Amory. The ants were noticed on the foundation pillars of many houses on which they formed conspicuous trails. He also reports that Prenolepis sp., is quite abundant in a number of houses at West Point. On a number of occasions during the past two weeks. S. geminata Fab. has been taking flight from its nests. In a number of cases the ants have emerged from beneath concrete sidewalks and in others from the walls or foundations of houses. A housekeeper at West Point has been troubled by the ants crawling around in the bathroom, especially in the vicinity of the water basin where the ants seek water. It is believed that the ants are nesting in the wall.

CARPENTER BEE (Xylocopa virginica Dru.)

Kansas

J. W. McColloch (June 15): Injury to farm buildings by carpenter bees has been reported from Maple Hill and Parker.

SILVER FISH (Lepisma saccharina L.)

Texas

W. E. Dove and F. J. Frueger (June): At Dallas injuries to rugs, overstuffed furniture, and to cords suspending framed pictures were attributed to the feeding habits of silver fish. They were observed in a new residence having a brick foundation and hardwood floors. It is thought that they entered the house by following the drainage from the ice box.

A FLY (Aphiochaeta sp.)

Pennsylvania

C. A. Thomas (June 22): Aphiochaeta sp. has infested dwelling houses in the mushroom district (Chester County) on several occasions this spring. These tiny flies came from the mushroom houses and outdoor manure piles near them. They penetrated ordinary fly screens and made themselves generally objectionable.

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